



International Finance

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International Reserve Currency Options

The dollar's continuing decline as the key international reserve currency has emerged as a major preoccupation of world financial experts. This was underscored at a conference on "Achieving Stability in the International Monetary System", held in Philadelphia on Oct. 31–Nov. 1 under the auspices of the Global Interdependence Center. At the conference, attended by leading authorities on the world payments system, the question of alternatives to a dollar reserve currency emerged as a recurring theme.

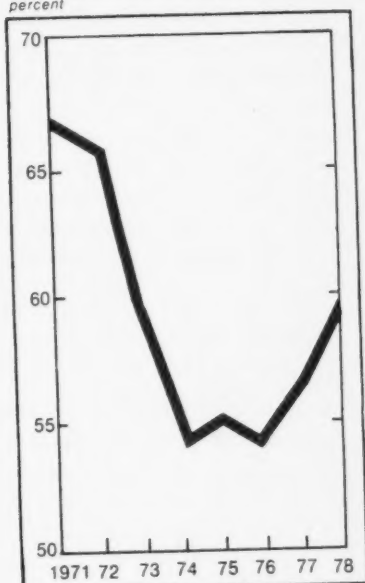
Although the dollar remains a major reserve currency, conference participants widely acknowledged the inevitability of the trend toward international currency portfolio diversification on the part of the world's money managers. The key question was whether there are more stable alternatives to either the dollar-reserve or the multiple-reserve currency systems.

The trend toward a multiple-reserve currency system has evolved despite the reluctance of the new key countries—e.g., Germany, Switzerland, and Japan—to face the inherent conflict of accommodating domestic monetary policy with the imperatives of reserve-exchange-rate management. Worldwide decisions to diversify have reflected irreversible market forces, including changing world trade patterns, increasing demand by developing countries for non-dollar key currencies as pegs, the rise in non-U.S. sources of debt, a relatively less important U.S. presence abroad, and concern over possible dollar weakness in the future.

The conferees generally conceded that a multiple-reserve-currency scheme may indeed be the only feasible course. A reconstituted dollar-reserve role was viewed as unlikely unless the United States could once again achieve high rates of real growth and productivity with low monetary expansion, maintain positive real interest rates, and keep a tight rein on the foreign-exchange markets. Conference participants were divided as to the practicality of reserve-currency status for the SDR. However, all agreed that this would necessitate acceptance and dissemination of the SDR by both official and private financial managers, and require a major revamping of the IMF to give it the powers of a world central bank.

Not only is the evolving multiple-reserve currency system the most pragmatic route for the near future, in the view of many conference participants, but it may also be the best way to enhance international monetary stability. It has already entailed increased monetary cooperation and economic policy harmonization among its key sponsors, as evidenced by such initiatives as the EMS and the new U.S. monetary stance.

Dollar share of worldwide
foreign-exchange holdings
percent



Source: IMF Annual Report

*Canadian economy
in downswing,
but export
growth is strong.*

*German monetary
policy continues
anti-inflationary.*

*Swiss economic
policy focused
on reducing
monetary growth.*

*Ireland paying
the price of an
independent currency.*

Canada's economic prospects are for slower GNP growth, continuing high inflation, and a larger balance-of-payments deficit, with possible declines in unemployment. The economy is in a downswing, with real growth at only 1% during the first half and inflation at more than 9%. The current-account deficit is likely to widen to C\$7 billion in 1979 after a C\$5.3-billion deficit last year. The unemployment rate, however, has declined from 8.5% in 1978 to just over 7% in recent months, a partial consequence of slower labor force growth. Also bolstering employment is the decline of the Canadian dollar, which has spurred substantial export growth and has led to higher operating rates in some key industries. Investment has also been strong because of the higher capacity utilization rates, and it is preventing aggregate demand from slipping too sharply. Nevertheless, the drag of the U.S. recession is expected to hold total real GNP growth below 2% in 1980, compared with estimated growth of 2.5% this year.

In the weeks following the Volcker package announcement, the German Bundesbank allowed German money market rates to rise above 9%, reflecting strong seasonal reserve demand by the banking system. It recently consolidated interest rates by raising the discount and Lombard rates by one percentage point to 6% and 7%, respectively. At the same time, it raised bank discount quotas by 5 billion DM. While the latter move is designed to prevent an over-tightening of rates in view of the forthcoming DM 2 billion Carter bond issue, the overall stance of monetary policy remains highly restrictive. Central bank money, the Bundesbank's target money stock, has grown at a seasonally adjusted annual rate of only 2.8% in the third quarter and looks set to achieve the lower end of the 6%-9% target range for 1979. The reason for the restrictive stance is the fear that the current year-on-year inflation rate of 5.7% will be incorporated into this winter's wage settlements, thus internalizing what was essentially imported inflation. Once the wage negotiations are settled, weaker real growth and the inability of monetary policy to affect wage costs are likely to lead the Bundesbank to a more relaxed monetary stance.

Swiss economic policy in 1979 has been aimed at reducing progressively the high monetary growth caused by heavy speculative inflows into francs at the height of last autumn's dollar crisis. The authorities have been reluctant to pursue an excessively restrictive monetary policy, however, for fear of provoking further upward pressure on the exchange rate and damaging the economic recovery underway since the start of 1979. By all accounts, the policy has succeeded. The economic recovery is expected to continue into the fourth quarter, and inflation has decelerated. (The annualized inflation rate for the June-September period was only 2%.) However, the export-weighted index of the exchange rate is now 20% lower in real terms than its peak of September 1978—good for exports, but a concern for Swiss authorities highly sensitive to the inflationary implications. Nevertheless, the dollar's recovery since the announcement of the new U.S. monetary policy has given the Swiss room to reduce liquidity further. Given the outlook for higher interest rates in both Germany and the United States, it seems unlikely that interest rates have yet reached their peak in Switzerland.

While Ireland's economic performance continues strong, signs point to a downward revision of the country's ambitious growth plans. The rapid growth of the last 18 months has led to a severe deterioration in the balance of trade. The balance registered a deficit of \$300 million in June, bringing the cumulative first-half deficit to \$1.6 billion, compared with \$800 million a year earlier. A further problem stems from the soaring budget deficit, which is now running at well over \$1.5 billion per annum, and which has triggered inflationary increases in the money supply. When Ireland shared a common currency with Britain, budget and balance-of-payments deficits had little impact on the Irish economy as they were insignificant relative to the large British economy and its currency. With the Irish currency de-linked from sterling, such deficits now have a large impact

*An export
bonanza for
Indonesia.*

on the Irish pound. As a result, the Government has been forced to introduce a tight squeeze on domestic credit, which should bring this year's GDP growth down to some 4%, versus 7% in 1978—with the threat of an even greater growth reduction in 1980.

Windfall earnings from soaring oil and commodity prices this year have spawned an export bonanza far beyond the highest hopes of Indonesia's economic planners when they devalued the rupiah 33.6% last year. Both oil and non-oil exports are expected to increase in value by at least 25% during the current fiscal year ending March 1980, while imports should grow more moderately. Gross oil and LNG earnings are likely to reach \$9.5 billion this year, up from \$7.6 billion in FY 1978/79. Non-oil commodity export earnings should add another \$5 billion, and manufactured exports will also post impressive gains. Overall, total export earnings will be at least \$14 billion this year, compared with \$11.5 billion last year. And with imports estimated at \$11-\$12 billion, the trade surplus should reach a minimum of \$2 billion. Government planners now face the enviable task of disposing of the sudden infusion of foreign-exchange reserves. It is expected that they will opt for prudence, rather than a spending spree reminiscent of 1974.

*Singapore's high
wage policy will
boost inflation.*

Singapore's inflation rate looks set to rise sharply this year. The largest boost to prices will stem from the July recommendation of the National Wages Council for an average 20% wage hike for 1979 and possibly 1980, as compared with previous annual increases below 10%. The high wage policy hopes to promote more technologically advanced production methods and an upgraded labor and management force, but is expected to add two percentage points to inflation in 1979. In addition, the effects of oil price rises in the first half of 1979 are now being felt, as is the increased cost of imports associated with higher inflation in nearly all Singapore's trading partners. Overall, these influences are expected to increase Singapore's inflation rate to nearly 8% in 1979, versus 4.8% last year, the highest in five years, but still one of the lowest in Asia.

*Argentine economy
showing signs of
strength, despite
high inflation.*

The level of Argentine economic activity continues high, with strong advances in construction and consumer spending. August industrial production was 21% above the year-ago period, and auto production has been especially strong this year. Real GDP for first-half 1979 rose 11% over first-half 1978, and the labor unemployment rate was only 1.5% in July 1979. In the external sector, both exports and imports are setting record levels, and capital inflows are strong. This despite a still high inflation rate that has averaged 164% for the first three quarters of 1979. In an effort to reduce inflationary expectations, the monthly rate of peso devaluation is being pegged well below the inflation differential between Argentina and the industrial countries. This policy has sparked considerable opposition from exporter groups and import-competing industries. Thus far, however, the Government has resolutely upheld the exchange policy as a means of promoting economic efficiency and competitiveness and curbing future inflation.

*Mild cyclical
decline in rubber
prices anticipated.*

A projected decline in auto sales is expected to lead world consumption of natural rubber next year to fall short of production for the first time since 1976. As demand softens and inventories rise, natural rubber prices, currently about 17% above year-ago levels, should fall. The extent of this cyclical decline, however, is likely to be considerably less than in the 1973-74 downturn because of: (1) a milder recession in the United States and less economic weakness abroad; (2) a continued rise in the costs of synthetic rubber feedstocks, as OPEC acts to head off another oil glut; (3) a shift toward radial tires, which require a higher proportion of natural rubber relative to synthetic than bias tires; and (4) the expected ratification of last month's International Rubber Agreement. Although the IRA does not take effect until Oct. 1, 1980, ratification would probably encourage stockpile building before then if prices drop to the low end of the agreed-upon range.

Consumer Credit Growth Soars in September

Consumer instalment credit rose by a record \$4.45 billion on a seasonally adjusted basis in September, according to a recent Federal Reserve Board release. This rapid growth—which sharply exceeded that in the three preceding months—represents a combination of a 3.8% increase in credit extensions and a 3.8% decrease in liquidations of existing debt. It is doubtful, however, that consumer credit—or consumer spending—will continue increasing at such rapid rates during the remaining months of 1979.

The surge in consumer credit reflects to a large extent the surprising strength in consumer spending in August and September. For example, retail sales during this two-month period increased at an annualized rate of 37%, far outstripping personal income growth. To some extent, the recent strength reflects a catch-up from the depressed spending levels of the preceding months, during which gas shortages were widespread.

This is especially noticeable in auto sales. Spurred by price rebates and increased gas availability, car sales in August and September rose sharply from the previous two months. This increase was reflected in the \$1.8-billion rise in instalment credit used to finance auto purchases in September. October car sales, however, fell 15% on a seasonally adjusted basis from September, and most analysts expect continued weakness. It is likely that consumer borrowing for auto

purchases will reflect this decline, and this should depress consumer credit growth.

Furthermore, the September surge in consumer credit preceded the Fed's October 6 credit-tightening announcement and the subsequent large jump in interest rates. The increased cost of borrowing in states in which consumer loan rates are permitted to rise with market rates has made such loans less attractive to borrowers. The rise in interest rates has also made usury ceilings in several states binding, and this could sharply curtail consumer credit growth in these states.

Consequently, consumer credit growth in the fourth quarter should be well below the 18% annualized growth rate registered in September. This does not necessarily mean, however, that consumer credit growth will turn negative in the next few months. Even if new credit extensions begin to slow down somewhat, liquidations of existing debt may decline even further as consumers delay loan repayments. Indeed, some analysts have pointed to the sharp drop in liquidations in September as evidence that some borrowers may be having difficulty repaying past loans. While it is too early to jump to such a conclusion, problems arising from high consumer debt burdens may indeed materialize when a significant slowdown in the economy and a sharp rise in unemployment occur.

Africa and Middle East Bimonthly Survey of Business and Finance

	COUNTRIES	CURRENT BUSINESS CONDITIONS	EXPORTS		GNP in 1978		BALANCE OF PAYMENTS			
			3 months ending	Change from year earlier	in billions of dollars	per capita	latest data	reserves in millions of dollars	12-month change	months of imports covered
Africa	Algeria	Authorities plan to export less crude oil and more refined petroleum in 1980.	July	+ 62%	19.3*	\$ 1,075	Aug.	2,296	+ 58%	4.0
	Egypt	Actual public investment outlays in 1979 expected to exceed budget target of \$3.7 billion.	May	— 25%	18.8*	484	July	438	— 22%	1.5
	Ethiopia	All maritime transport and transit services nationalized.	Mar.	+ 2%	3.7	125	Aug.	156	— 16%	4.2
	Ghana	Government takes drastic measures to combat cocoa disease.	n.a.	n.a.	14.3*	135	Aug.	336	+ 130%	4.0
	Liberia	High rubber prices trigger rehabilitation and expansion of plantations.	Dec.	+ 10%	0.7	428	Aug.	22	— 44%	0.6
	Libya	Beginning 1980, crude oil sales to foreign companies not investing in Libyan exploration will be reduced.	June	+ 50%	17.5*	6,635	Sept.	5,164	+ 18%	10.5
	Madagascar	Increased foreign borrowing directed to productive investment in agriculture and industry.	June	+ 5%	2.0	240	Feb.	28	— 68%	0.8
	Morocco	Investment in industry fell 25% during first half, compared with the year-earlier period.	Apr.	+ 16%	9.1*	497	July	640	+ 29%	2.5
	Nigeria	Supplementary budget boosts federal allocations by \$3.3 billion, reflecting higher oil revenues.	July	+ 85%	41.4	520	Aug.	4,103	+ 118%	4.5
	Sierra Leone	Hosting of 1980 OAU Conference diverts funds from agricultural development.	June '78	+ 35%	0.9	220	Aug.	33	— 15%	1.7
	South Africa	Fiscal and monetary policies emphasize growth rather than inflation-control.	June	+ 40%	45.7	1,650	Aug.	921	+ 7%	1.4
	Tanzania	Producer prices for export crops raised 20%-25%.	Dec.	— 1%	3.4*	213	June	100	— 47%	1.3
	Tunisia	Three contracts awarded for expanding phosphate complex at Gabes.	June	+ 34%	5.8	936	Sept.	446	+ 18%	2.6
	Zambia	Disastrous 1978/79 harvest causes serious maize shortage; food crisis feared.	Dec.	— 8%	2.8	512	July	104	+ 25%	2.0
Middle East	Iran	Recent political turmoil confuses status of oil exports to the United States.	July	— 2%	76.4*	2,227	May	10,814	— 13%	7.5
	Kuwait	Kuwait considering substantial oil production cut next year.	July	+ 73%	12.6**	11,850	Aug.	2,835†	— 6%	7.4
	Saudi Arabia	Direct exports of crude rising steadily as a proportion of total sales.	July	+ 38%	13.2*	17,820	Aug.	1,002†	+ 23%	3.3
	United Arab Emirates	Government development outlays continue to favor infrastructure and hydrocarbon industry.	July	+ 50%	57.0**	7,130	Aug.	17,373†	— 10%	8.8

*1977

**FY 1976/77

†Excluding State reserves

Inflation: When Will the Cure Take Effect?

Perhaps the most frustrating aspect of the Federal Reserve Board's new inflation-fighting strategy is the inevitable lag between its initiation and the first concrete sign of its success. Economists caution that patience is critical, pointing out that it could take many months before the new policy brings about an abatement in inflation. And unfortunately, the latest reports of persistent hikes in both consumer and producer prices have only increased anxiety further.

The Consumer Price Index rose a seasonally adjusted 1.1% in September, a heady 14% annual rate. A continuation of the trend established so far this year would make the 1979 price rise the worst since 1946, when the removal of World War II price controls sent prices soaring. Producer prices in October provided little hope that the retail price surge will ease substantially in the near future. The finished goods index climbed 1.0% on top of a 1.4%-increase in September. Although the October figures reflected some moderation in the rate of increase of energy prices and a slight decline in food prices, the costs of other finished goods increased markedly, suggesting a more broadly based inflation problem.

How soon the inflation statistics will begin to reflect the Fed's credit-tightening policies is not known. There remains a good deal of mystery, as well as controversy, about the links between the supply of money and credit, inflation, and economic activity.

The Fed has the power to influence total spending, and ultimately to affect prices, by controlling the supply of money and credit. In doing so, the Fed has pushed interest rates to unprecedented levels. But initially, higher interest rates reduce the level of economic activity, not prices. There are signs that the pinch of tighter money is already being felt by automakers in Detroit and by homebuilders nationwide. Automakers have planned production cutbacks and huge layoffs this month in response to disappointing sales and sizable increases in the cost of financing inventories. And real estate activity is slowing as the availability of funds is reduced and as usury ceilings—even those recently raised—become binding.

This crucial time-lag factor raises doubts about whether the new Fed policy, with its attendant uncertainties, can be sustained in the face of political pressures almost certain to come. If the Fed adopts anything other than a gradual approach to the reduction of the money supply, it risks deepening the recession that now appears to be unavoidable. At the same time, the Fed is encountering a high degree of skepticism from its critics who doubt that its program for reducing inflationary expectations and restoring price stability will work. Nevertheless, supporters of the new tack insist that it must be executed with consistency, arguing that an "on again, off again" approach would only ensure its failure.

COUNTRY OF PAYMENTS		MONEY AND BANKING							COUNTRIES
IMF edit, mil- lions of dollars	current influences on payments	12-month changes				central bank rate exchange rate in U.S. dollars		current monetary conditions	
		latest data	consumer prices	latest data	domestic credit	November 7, 1979			
0	Crude oil price raised 11.8% to \$26.27 per barrel.	Dec.	+ 17%	Dec.	+ 39%	—	.2750	A \$500-million Euroloan for Sonatrach signed Oct. 24.	Algeria
337	Oil export revenues this year projected at \$1 billion, net of imports.	June	+ 6%	June	+ 59%	9.00%	1.45	France to lend \$138 million for development projects.	Egypt
24	IMF grants \$23.4-million loan to offset declining coffee export receipts.	May	+ 20%	Apr.	+ 30%	—	.4900	Year-end sees traditional credit expansion.	Ethiopia
79	Arrears on foreign loans said to have totaled \$400 million at end-July.	Dec. '78	+ 191%	Apr.	+ 50%	13.50%	.3700	Credit to public enterprises climbs sharply.	Ghana
12	Newly-built OAU village to be transformed into tourist haven.	Dec.	+ 9%	Mar.	+ 67%	—	Par	Public-sector credit continues rapid expansion.	Liberia
0	Crude oil prices raised.	Dec. '77	+ 60%	June '77	+ 7%	5.00%	3.41	Credit generally available.	Libya
15	Need for substantial rice imports continues.	June	+ 12%	Apr.	+ 42%	5.50%	.00495	Credit to public sector expands briskly.	Madagascar
224	Import restrictions imposed in September to contain the trade deficit.	Apr.	+ 8%	June	+ 21%	4.50%	.2635	Money supply expanding.	Morocco
0	Ban on rice imports protects local producers; trade balance impact modest.	Jan.	+ 16%	Mar.	+ 33%	5.00%	1.78	Credit restraint continues.	Nigeria
30	Diamond production continues to decline; price advances slow.	Mar.	+ 13%	June	+ 43%	—	.9990	Credit to Government soars.	Sierra Leone
305	Mineral sales set to rise 33% to \$11 billion this year.	July	+ 13%	June	+ 9%	7.00%	1.2110	High capital market liquidity continues.	South Africa
117	A 45% rise in 1978 imports brings severe import controls.	Mar.	+ 14%	June '78	+ 23%	—	.1230	Bilateral aid underpins reserve level.	Tanzania
32	Sharply higher oil revenues expected to reduce trade deficit.	Aug.	+ 9%	June	+ 9%	5.75%	2.57	France to lend \$44 million for industrial projects.	Tunisia
371	Much-improved trade surplus could swing current account into surplus.	Oct. '78	+ 13%	June	+ 9%	—	1.30	Moderate monetary expansion continues.	Zambia
0	Substantial crude sales reported at very high spot market prices.	Apr.	+ 11%	Feb.	+ 43%	9.00%	n.a.	Money supply rising steadily.	Iran
0	Main crude oil price raised 10% to \$21.43 per barrel.	Mar.	+ 8%	June	+ 41%†	—	3.58	Reduced liquidity keeps interest rates high.	Kuwait
0	Jan.-Aug. oil output averaged 9.4 million bpd, up 23% from year earlier.	n.a.	n.a.	May	+ 21%†	—	.2980	Rial rate cut to 3.35 per dollar from 3.36.	Saudi Arabia
0	Abu Dhabi Jan.-Aug. oil output averaged 1.45 million bpd, 1% above year ago.	Dec.	+ 2%	Mar.	+ 44%†	—	.2670	Bank claims on private sector rising more slowly.	United Arab Emirates

†Private sector only

World Interest Rates

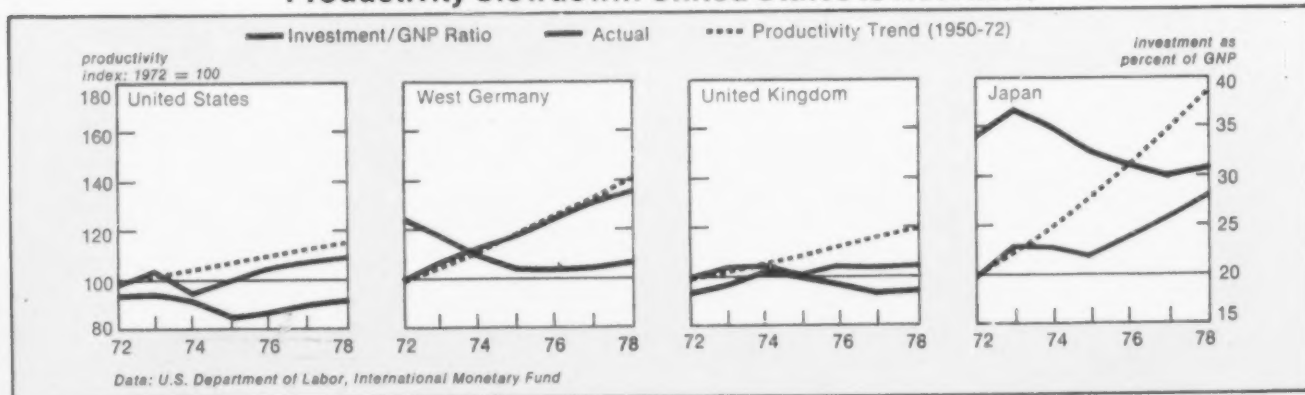
market rates of November 7, 1979; bond yields as of November 2, 1979

in percent per annum	U.S.	Canada	Britain	Belgium	France	Germany	Italy	Netherlands	Switzerland	Japan
Central Bank Discount Rate	12.00	14.00	14.00	10.00	9.50	6.00	12.00* penalty rate 15.00	8.50	2.00	6.25
Day-to-Day Money	13.50 Nov. 8	14.00	12.00	10.35	11.75	7.00*	12.50*	10.25	0.25	7.625
Treasury Bills 91-day, Middle Rates	12.46	13.50	13.75	14.00 120-day	12.88 one-year	n. a.	11.85* 92-day	no dealing	no market	5.125 2-month
Commercial Paper prime, 3-month, asked	12.875 finance paper	14.50 finance paper 15% tax w/h	13.61 H. P. on discount basis	9.90 Certified	12.875 Interbank	no market	no market	no market	no market	not traded
Bankers' Acceptances 3-month, asked	14.45	14.50 15% tax w/h	14.625	12.00 Certified	not traded	7.40*	14.25*	no market	3.00 not traded	no market
Government Bonds Long-term, new and old issues, average yield	10.43	11.55	13.47	9.50 20% tax w/h	10.47	8.09	13.45*	9.21	3.71	7.93
Industrial Bonds prime, long-term, new and old issues, average yield	10.70 Aa Industrials	11.95	13.15	12.04 20% tax w/h	11.91	8.26	13.84*	9.66	4.92	6.96
Bank Short-Term Rate to Best Borrowers (prime rate)	15.50	15.00	15.00	14.25	10.10	7.25*	17.00*	12.50	4.00	6.50
Bank Time Deposits 3-month	14.00 Cert. of Dep.	14.35 Cert. of Dep.	15.125 Cert. of Dep.	14.40	12.9375	9.55*	10.00*	11.00 large deposits	3.875 residents only	4.00 20% tax w/h
Eurocurrencies 3-month, asked	15.4375	no market	14.875	no market	14.25	8.8125	no market	10.3125	3.8125	no market
Exchange Rates—in U.S.\$ rates floating against the \$	—	.8440	2.0935	.0346	.2384	.5597	.001206	.5035	.6154	.0041
Forward Exchange Cover 3-month, in percent p.a. D = discount, P = premium	—	1.60 P	Flat	1.38 P	1.14 P	6.71 P	1.32 D	5.08 P	12.15 P	7.91 P

Eurodollar Deposits (London, interbank, bid) November 8 7-day 14.3125 1-month 15.125 3-month 15.75 6-month 15.375	International Arbitrage (3-month, hedged) † in favor of U.S. dollars U.S.-U.K. Treasury Bills -1.10 U.S.-Canada Treasury Bills -2.03 U.S.-Canada Finance Co. Paper -3.02 Eurodollars-U.K. Local Auth. Deposits +1.31	Eurobonds (average yield on recent straight debt issues) U.S. Dollar Bonds 7 yrs. and under 11.85 Over 7 yrs. 11.75 DM Bonds 7 yrs. and under 8.45 Over 7 yrs. 8.55	Gold Price London afternoon fixing 395.00 (per fine ounce)
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The above interest rate quotations refer to the past week and may not be construed as offers by The Chase Manhattan Bank. The quotations for Bank Short-Term Rate to Best Customers, while including customary commissions, reflect neither possible other fees nor varying compensating balance requirements.
 * Market rates as of October 31; bond yields as of October 26.

Productivity Slowdown: United States Is Not Alone



The Worldwide Productivity Slowdown

Lurking behind the statistics of sluggish economic performance in most of the industrial countries is the decline in the rate of growth of labor productivity. The United States and its major trading partners have all seen their productivity growth slacken since 1972, although performance has varied widely from country to country (see charts on bottom of page 6).

In Japan, for example, labor productivity growth fell sharply from an average annual gain of 9.7% during 1950-1972 to a still-robust 4.9% average in 1972-1978, while Germany's rate of productivity increase fell only slightly to 5.3% during 1972-1978, from 5.9% in the earlier period.

The burden of sagging productivity is probably weighing more heavily on the U.S. economy, however, as business conditions soften and rampant inflation persists. The U.S. index of output per hour worked in the private business sector—a standard measure of U.S. labor productivity—fell at an annual rate of slightly more than 2% in the first half of 1979 before showing a scant 0.1% rise in the third quarter. Although this short-term trend is a legitimate cause of concern, historical experience strongly suggests that the U.S. productivity decline will be reversed as the business cycle bottoms out. More troublesome, however, is the long-term sluggishness upon which the cyclical decline has been superimposed. The trend growth rate in U. S. labor productivity was almost 3% per year in the 1950-1972 period, but only 1% during 1972-1978.

A major cause of slowing productivity gains in most industrialized countries is increased economic uncertainty, which has acted to inhibit capital formation. But perhaps even more important in recent years is a new phenomenon not yet widely recognized as a cause of slow growth in the capital stock and productivity: the rapid rise in the relative price of energy. While the major determinants of labor productivity are the capital stock and the capital/labor ratio, energy as a factor of production also has a big impact on productivity.

Workers are generally more productive when they have good modern tools in sufficient quantity and an efficiently designed space in which to use them. A nation's capital stock—the mines, the machinery in manufacturing plants, the commercial offices and stores of the service sector—is the set of tools the labor force uses. The stock of capital in the United States grew in relation to the number of employed people at an average annual rate of 2.6% from 1950 to 1972. Since then, this ratio has increased at an annual rate of only 0.3%, and has actually declined in each of the last three years as the relative prices of capital, labor, and energy have changed. Relative prices have shifted in the foreign industrialized countries as well, but not as dramatically—largely because energy prices and taxes

were already significantly higher—leading to less favorable capital/output ratios.

Prices serve as an economic signal to guide the allocation of resources. If the price of one good rises relative to other goods, the appropriate buyer response is to utilize less of the more expensive good. During 1950-1972, for example, the relative price of energy fell in the United States. The wholesale price index for fuels and power rose an average of only 1.4% per year, while labor costs rose 4.7% and capital costs about 2%. Thus, American businesses tended to make investments that minimized the use of labor, with little concern for energy consumption.

From 1972-1978, however, U.S. energy prices almost tripled. Wages, on the other hand, rose only about 50% in the same period, while prices of capital equipment and structures increased 60%. Currently, labor is the productive input whose price is rising most slowly, and U.S. businesses have responded by expanding payrolls extremely rapidly since the last recession. The net stock of capital per worker has failed to keep pace, and labor productivity has suffered. This trend has been reinforced by the fact that capital requires the use of energy, so attempts to cut consumption of energy lead to a reduction in investment as well.

Uncertain economic conditions have been suggested as another cause of lagging capital investment and, hence, slower growth in labor productivity. An investment project may be undertaken with the expectation that, on average, it will yield 10% per year, higher in some years and lower in others. But increasing uncertainty means the range of outcomes will be greater. Since most people and businesses are risk averse, they would require a greater yield, on average, to compensate for the increased riskiness. Thus, fewer investment projects would be perceived as profitable, and investment would fall. Furthermore, those projects still undertaken focus on conserving energy, not labor.

The 1970s have clearly witnessed a worldwide increase in uncertainty, with the shift from fixed to flexible exchange rates, accelerating world inflation, and two large jumps in the price of oil. And as the charts on page 6 show, the growing uncertainty has been accompanied by a decline in the ratio of investment to GNP in the major industrial countries and consequent reductions in labor productivity growth.

It is almost certain that the price of energy will continue to rise relative to both labor and capital, since energy is now viewed as the scarcest resource. Therefore, the major hope for improving labor productivity in the 1980s lies in spurring capital formation to reverse the decline in the investment/GNP ratio and thus increase the capital/labor ratio.

Douglas L. Bendt

Jamaica Pursues Road to Recovery

Since May 1978, Jamaica has been undertaking an economic stabilization program within the context of an IMF Extended Facility Arrangement. By implementing restrictive demand-management policies and introducing corrective price and exchange-rate adjustments, the authorities have sought to reduce the persistent deficits in the government budget and the current account, while attempting to reverse a deteriorating trend in economic activity. And indeed, limited progress toward these objectives was made in the first year the program was in effect, despite adverse internal political repercussions.

Results of stabilization

As a consequence of the austerity effort, the budget deficit of the central government and the state-owned financial entities dropped from an average of 15% of GDP₄ for the two years ending in fiscal 1977/78 to 11.4% in FY 1978/79. Current revenues rose from an average of 26% of GDP to 30%, as taxes on consumption, production, and trade of a wide range of goods and services were increased, and as the levy on bauxite production—which is denominated in U.S. dollars and is a major source of government revenue—benefited from a depreciating Jamaican currency. Meanwhile, current and capital expenditures were contained to the previous year's level of 28% and 13% of GDP, respectively. In addition, the financial condition of the entities comprising the remainder of the public sector was enhanced through the adoption of badly needed upward adjustments in the prices of the goods and services they provide. This permitted subsidies to be reduced from a peak of nearly 9% of GDP in FY 1976/77 to less than 8% in FY 1978/79.

The improved fiscal situation, combined with greater government reliance on external borrowings to finance the budget deficit, resulted in a halving of the growth rate of domestic credit to the public sector to 36% in FY 1978/79. In turn, this freed funds for use in the private sector and set the framework for gradual reductions in the country's rapid rate of overall monetary growth. Credit to the private sector rose by some 25%, after declining at an annual average rate of 5% in the previous two years. At the same time, increased bank reserve requirements and higher interest rates helped to slow the growth of the monetary aggregates to 14% from a previous annual average of 17%.

To alleviate the balance-of-payments problem, the authorities unified the dual exchange-rate system in effect since 1977 and introduced mini-devaluations of the currency. Secondly, the Government promoted a recovery of tourism; this resulted in the inflow of

tourists rising 38% in 1978, in contrast to significant declines for the previous two years. The positive approach to the foreign sector, combined with the restriction of aggregate demand, led to a considerable narrowing in the Jamaican current-account deficit, which shrank from a high of about 10% of GDP in 1975-76 to 5% in 1978.

Impact on growth

The Jamaican Government's fiscal and monetary contraction initially had a negative impact on GDP, which fell by an estimated 2% in 1978. However, this decline in economic activity was small in comparison with the successive 6.7% and 4% declines in GDP during 1976 and 1977. At the present time, the Government's hope for a recovery of national income is more justified because the allocation of resources and incentives for investment have been improved in key sectors, such as agriculture, tourism, and export-oriented manufacturing.

Dealing with inflation

Another inevitable consequence of the Government's adjustment program was an acceleration of inflation from less than 15% in 1977 to approximately 50% in the second half of 1978. This followed mostly from a reduction in subsidies, a relaxation of price controls, increases in sales taxes, and currency devaluation. While inflationary pressures have recently eased, with prices rising at an annual rate of less than 30%, Jamaica's inflation problem is not completely resolved because the budget deficit is projected to be cut only gradually (to a still-high 8% of GDP during the current fiscal year) and there are subsidies yet to be eliminated.

Clearly, inflation is also determined by the degree of monetary restriction and the size of wage increases. In this context, the authorities intend to allow interest rates to play a greater role in augmenting the country's financial resource base and in allocating the available bank credit. To this end, interest rates are to be raised periodically to assure positive real rates of return. Meanwhile, the Government is continuing with an incomes policy that limits wage increases.

In conclusion, Jamaica has taken the first steps to achieve a sustainable expansion of its economy by confronting head-on its fiscal problems and balance-of-payments constraints. If the authorities persevere with their sounder economic policies and thereby regain the confidence of domestic and foreign investors, Jamaica's future growth performance will be substantially enhanced.

Nina Ramondelli